

## SIGNAL-ADAPTIVE NOISE REDUCTION IN DIGITAL RADIOGRAPHIC IMAGES

### ABSTRACT

[0035] Signal-adaptive noise reduction in digital radiographic images is described herein. Embodiments comprise methods for signal-adaptive noise reduction in digital radiographic images, comprising the steps of: obtaining raw x-ray image data of an imaged object; processing the raw x-ray image data to create processed x-ray image data; inputting at least one of the raw x-ray image data and the processed x-ray image data to an image processor; developing at least one of a first intensity modulation image from the raw x-ray image data and a second intensity modulation image from the processed x-ray image data; deriving a structure-dependent noise filtered image using the processed x-ray image data; performing signal attenuation-dependent blending; and creating a noise-reduced digital x-ray image therefrom. Computer-readable mediums encoded with programming for facilitating signal-adaptive noise reduction in digital radiographic images, and digital radiographic imaging systems comprising such programming, are also described.